

**REMARKS**

In the present Amendment, Claim 1 has been amended to incorporate the subject matter of Claims 2 and 4. Claims 2 and 4 have been canceled, accordingly.

Claims 11 and 12 have been amended to change their dependency.

No new matter has been added, and thus entry of the Amendment is respectfully submitted to be proper. Upon entry of the Amendment, Claims 1, 3 and 5-13 will be all the claims pending in the application.

In Paragraph Nos. 3, 6 and 7 of the Office Action, Claims 1-3, 5 and 7-10 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by DE 1970685, JP 62-097151 and JP 62-125550, respectively. Further, in Paragraph No. 5 of the Office Action, Claims 1-3, 5, 8-10 and 13 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Smith et al '957. Last, in Paragraph No. 8 of the Office Action, Claims 1-3, 5-10 and 13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ichihara et al '756 in view of Ito JP 62-270386 and Iida et al '961.

---

Applicants have in this Amendment, amended Claim 1 to incorporate the subject matter of Claim 4, which was not included in the rejections. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections.

In Paragraph No. 4 of the Office Action, Claims 1-13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Iida et al '961 in view of Murray et al ("Synthesis and Characterization of Nearly Monodisperse CdE...", J. Am. Chem. Soc., vol. 115(19), pp.8706-8715).

Applicants respectfully submit that Claims 1, 3 and 5-13 as amended are not obvious over Iida et al '961 in view of Murray et al for the following reasons.

The object of Iida et al '961 is to obtain an optical disk capable of recording and reproduction at a high recording density. Iida et al '961 does not disclose producing a colloidal dispersion of metal chalcogenide nanoparticles, as recited in the present Claim 1 as amended.

Iida et al '961 discloses semiconductor particles having a particle size of from 0.1 to 50 nm, and preferably, 0.5 to 30 nm. However, Iida et al '961 does not teach or suggest the criticality of the particle size from the viewpoint of sensitivity.

Applicants submit that it is impossible to predict the effect of the particle size on the sensitivity, based on the disclosure of Iida et al '961.

Murray et al discloses a method of producing a colloidal dispersion of metal chalcogenide nanoparticles. However, Murray et al does not disclose or suggest the application of the thus obtained dispersion in an optical recording medium. Further, Murray et al is silent on the average particle diameter.

---

On the other hand, the object of the invention in the present application that is to provide a rewritable optical recording material of high sensitivity. As described in the specification of the present application, the recording layer formed by a nanoparticle colloid having an average particle diameter (particle size) from 1 to 20 nm, shows higher sensitivity (Examples and Comparative Examples).

Accordingly, any possible *prima facie* obviousness has been overcome by the unexpectedly superior results of the present invention in terms of sensitivity.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the rejection.

In Paragraph No. 9 of the Office Action, Claims 1-13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ichihara et al '756 in view of Ito JP 62-270386 and Iida et al '961, further in view of Murray et al and JP '550.

Applicants respectfully submit that Claims 1, 3 and 5-13 as amended are not obvious over the cited references for the reasons as set forth above and as follows.

The object of Ichihara et al '756 is to obtain a phase transition type optical recording medium excelling in repetitive over-writing adaptability and land-groove recording performance. Ichihara et al '756 does not disclose the method of producing a colloidal dispersion of metal chalcogenide nanoparticles, as recited in the present Claim 1 as amended.

Ichihara et al '756 discloses semiconductor particles having a particle size of 10 to 100 nm, and preferably, 20 to 50 nm. However, Ichihara et al '756 does not teach or suggest the criticality of the particle size from the viewpoint of the sensitivity.

---

The object of JP '386 is to obtain an optical recording medium that exhibits a uniform optical property over a broad area and excellent storage stability. JP '386 discloses an optical recording medium produced by forming a thin film comprising ultra-fine particles dispersed in an organic matter on a substrate wherein the ultra-fine particles is GeTe, GaTeSe, or etc. However, JP '386 does not disclose or suggest producing a colloidal dispersion of metal chalcogenide nanoparticles, as recited in the present Claim 1 as amended. JP '386 also discloses an average particle diameter of about 30 nm, which is outside the present invention.

On the other hand, the object of the invention in the present application that is to provide a rewritable optical recording material of high sensitivity. As described in the specification of the present application, the recording layer formed by a nanoparticle colloid having an average particle diameter (particle size) from 1 to 20 nm, shows higher sensitivity (Examples and Comparative Examples).

Accordingly, any possible *prima facie* obviousness has been overcome by the unexpectedly superior results of the present invention, because none of the cited references teaches or suggests the criticality of the particle size on sensitivity.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

---

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/874,313

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



---

Fang Liu  
Registration No. 51,283

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: October 14, 2003